THEORETICAL ARTICLE

Subjectivity in the Human Sciences

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Abstract

Subjectivity is ubiquitous and implies perspectives that range in scope from the intrapersonal (as in individual musings and daydreams) to the intercultural (as in communication between and among identities) and in sophistication from the inchoate babblings of infants to the theoretical pronouncements of philosophers and mathematicians. Q methodology is a philosophical and conceptual framework that, in tandem with its technical and analytical procedures, provides the basis for a science of subjectivity that is applicable across all humanities and sciences as well as their extensions into public policy. This article presents the basic principles and procedures of Q methodology (rooted in the fundamentals of factor-analytic developments of the past century) and demonstrates its applicability to a variety of subject-matter domains, including literary interpretation, strategic planning and decision making, scientific creativity, program evaluation, and the intensive analysis of single cases.

Q methodology was introduced in 1935 by British physicist/psychologist William Stephenson (1902–1989) and was intended to serve as the basis for a science of subjectivity, but it has now been more than 30 years since his passing and so few in the current generation of psychologists are likely familiar with his ideas, which were not all that well-known even to his own generation. Moreover, although 24 of his more than 150 scholarly publications appeared in *The Psychological Record* between 1961 and 1988, a good many others were published in a variety of other journals and chapters so that many of his central ideas are not to be found in a central location since the appearance of his *The Study of Behavior: Q-Technique and Its Methodology* (Stephenson, 1953).

At the risk of redundancy, therefore, a major purpose of this article is to reintroduce several of Stephenson's major ideas and concepts, including Q-methodological principles and practices that have continued to evolve more recently, and to show their applicability to a variety of subject areas across the human sciences in general. There are several chapter-length introductions to Q methodology along with an increasing number of encyclopedia entries (e.g., Bambery & Porcerelli, 2010; Brown & Good, 2010), but these typically focus on a specific subject domain or on technical accouterments of the methodology rather than, as in the recent article by Midgley and Delprato (2017), on its more abstract and conceptual foundations to which this article gives prominence and which were among Stephenson's chief concerns. In this regard, this article can be considered a call to return to the foundations of Q methodology.

Phenomenon

The term *subjectivity* refers to the things that we say—silently to ourselves as in reveries or publicly to others as in conversation—from our own vantage point, and excluding that which is objective. It is an objective fact that Earth turns and that birds fly, but if someone asserts the beauty of a sunset (or man's inhumanity to man, or the superiority of classical compared to popular music, or the reality of life after death, etc.), we have crossed over into the realm of opinion and conjecture. Moreover, objective facts are true and independent of my or anyone else's will. That $2 + 2 = 4$, for instance, or that water boils at 212°F requires no sponsor; subjective remarks, on the other hand, require someone to express them: It is *I* who claim that the sunset is beautiful, not *you*, and so this avowal is subjective to me and in this regard we say that it is *self-referential*. Or you may assert the inhumanity of man, which

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is subjective to you, whether or not I agree with you. In sum, there are right answers when it comes to facts, but none when it comes to opinions, which cannot be proved right or wrong and consequently are not subject to proof or refutation: they can only be asserted, but this does not preclude measurement. It is, of course, the case that uncontested truths at one point in time can become controversial, as in the current debate about climate change in the United States, and also that settled truths can exist alongside pockets of opposition, as in the existence of the Flat Earth Society, but this simply means that the line between subjective and objective shifts with context. Even members of the Flat Earth Society will argue over fine points.

Principles

Monism The term *subjectivity* carries diverse connotations, such as point of view, distortion, bias, and emotion (Sabini & Silver, 1982), many of which imply a dualism between events on the surface and an internal world, and frequently carry the assumption that the former is controlled by or has its origins in the latter. In the popular 1960s song *Georgy Girl*, for instance, the folk group The Seekers sing, "Hey There! Georgy girl / There's another Georgy deep inside," and this way of thinking has wide currency in a culture that not so long ago entertained inner demons as causes of human action along with exorcism as a procedure for expelling them, and although the idea of demons has little contemporary popularity, the mode of thought that supported it has not been thoroughly expunged. Cognitive structures, feelings, attitudes, and other internal causes, for instance, are thought to be as real as demons used to be and to be both responsible for much of what we say and do and accessible only by fMRI, introspection, and related procedures; and the traits and variables thought to explain behavior are evidenced only indirectly by the hundreds of tests available from a voluminous assessment industry.

In contrast to dualism, monism presumes that mental events and action are not bifurcated, but occur within the same nonisolated space, a view shared earlier by Dewey and Bentley (1949) and Stephenson (1984), and more recently by Noë (2009) and Smith (2016). Skinner (1975) expressed a similar view when he asserted that we do not strike out *because* we are angry; rather, we both strike *and* feel angry at the same time (and for reasons embedded in the environment, he went on to say). There is no realm of mental life that stands apart from behavior and guides its movements. When we assert the self-referentiality of the phrase "the sunset is beautiful," therefore, we do not imply that there is a substantive self that is located somewhere, like a cognitive structure or some other mental agent; we merely mean (at least implicitly) that "*I think* that the sunset is beautiful," or that "*In my judgment* . . . ," or "*From my point of view* the sunset is beautiful."

Consciring This term received renewed attention in an essay by theologian C. S. Lewis (1960) and has been incorporated into communication theory by Stephenson (1980), and it is connected etymologically to *conscience*. It has its origins in reference to knowledge (from the Latin *scio*), in particular to knowledge that is shared (*con*), as when two people share a secret; i.e., are mutually aware. *Consciousness* is related, but is of more recent vintage and lacks the association with sharing, as in Descartes's *cogito* (self-reflected awareness of one's own thinking). The obvious tie to subjectivity is that virtually the entirety of what is communicated in social conversation is of a shared nature for those who belong to the same culture or society. Everyone in the United States knows about Donald Trump, about forest fires in the American West, about the baseball World Series, about the latest literary and motion picture sensations, and other topics that populate the daily newspapers and the evening news, and these are the issues that become the focal point of neighborly gossip and subjective communicability. At a more micro-level, astrophysicists as a specialized society are knowledgeable and communicable about the stars, and members of street-corner gangs are equally conversant about the knowledge that they share and the specialized language through which they express it, which may be inaccessible to those outside the subcultural membership.

Concourse The concept of *concourse* is related to conscire and is traceable to Cicero, whose *concursus* referred to a gathering or running together, as when Rome's senators assembled to discuss the issues of the day. The body of talk about any topic constitutes the concourse of communicability about that topic (Stephenson, 1978), and it is voluminous and, in principle, infinite in magnitude: It is impossible to exhaust all that can be said about anything. The facts (information) associated with an event or topic are finite, but what can be said subjectively about those facts (communication) is unlimited. There are typically many tributaries that converge in concourse and contribute to its form and content.

Field The concept of *field* (as in electromagnetic and gravitational fields) is one of the most important contributions to science of the 19th century, but the human sciences have been slow to embrace it. A notable exception is Kantor's (1959) interbehavioral field, which can be grasped by considering his conception of a *psychological event*—$PE = C$ (k, sf, rf, hi, st, md), where *sf* represents the stimulus function of an object, *rf* the response function of the organism, *hi* the history of past object↔organism interactions, *st* the immediate situation, and *md* the medium (e.g., light and sound waves) that brings organism and object into contact with one another. The symbol *k* stands for the specificity principle (that every interaction is unique), and *C* holds that all of the above functions constitute an interactive field of interdependencies that cannot be

reduced to any one of its components, with causality thereby giving way to probabilism (Hayes & Fryling, 2018; Smith, 2006). Field conditions are fully compatible with the previous principles inasmuch as they imply that subjectivity arises as a consequence of the particular interactions of persons with things (including other persons), with consciring and concourse emerging as a function of common experiences.

Operantcy Operational definitions are legion in the human sciences and consist of measurements prescribed to give meaning to concepts. By *anxiety*, for example, is meant scoring above a certain level on a test designed to measure it. The temporal sequence is salient: first the concept, then the behavioral measurements that specify what is meant by it. An *operant*, by way of contrast, consists of "a set of acts" (Skinner, 1953, p. 65), as when an organism turns its head or takes a step: these head-turnings or step-takings are classes of behavior, and the number of times that the organism engages in these common events under natural conditions is its *operant level*. Subjective behavior is operant inasmuch as it occurs naturally within an environment—it is pure behavior and in no way dependent upon test constructions or indicative in a reductionistic way of some variable other than itself—and an advantage of observing subjectivity in terms of its intrinsic activities is that it keeps descriptions, interpretations, and concepts close to actual operations and without intrusions by the scientist.

The Science

Q methodology is a general term that incorporates a technique for gathering data, a statistical method for analyzing the data, and a conceptual and philosophical framework that together constitute the basis for a science of subjectivity par excellence. Technical details are spelled out elsewhere (for a condensation, see Brown, 1993). More abstract principles and concepts are elaborated in the following pages.

Concourse Q methodology has its foundations in concourse (see above), i.e., in the corpus of subjective communicability about a particular topic. Consider as an illustration the matter of literary interpretation, in this case the interpretation of a poem. The particular poem in question is of little consequence (for details, consult Brown & Mathieson, 1990) in that virtually any poem could have prompted a volume of verbal commentary such as the following outpouring gathered from several readers (taken from Richards, 1929, pp. 104–117):

> I feel hypnotized by the long boomy lines. But the noise when I stop myself being hypnotized seems disproportionate to what's being said. . . . I can't decide about this poem—it portrays something with which the modern

mind has little sympathy, and yet there is a sense of infinite longing. . . . The style seems rather exaggerated. . . . Its appeal is entirely sentimental, and the subject is one of the most hackneyed. Nearly every popular song deals with the same topic. . . . The triviality of the sentiment is equaled only by the utter puerility of the versification. . . . The simplicity, accuracy, and justness of the expression somehow alters the focus: What might have been mere sentiment becomes valuable; the strength of the underlying feeling becomes apparent through the sincerity. . . . The whole comparison between childhood's Sunday evenings and passionate manhood is cheap, i.e., it's too easy and also unfair both to childhood and manhood. . . . The subject matter is appealing: The picture given in the first verse is vivid and original.

The poem constitutes the stimulus in Kantor's psychological event, and words being the way they are, there are numerous connotations (*sf*) associated with practically every word of the poem, and these meanings have the potential to engage with a wide variety of responses (*rf*), depending in part on the readers' prior experiences with poetry in general (*hi*) as well as with the individual words themselves. Some degree of idiosyncrasy (*k*) is inescapable and all of these potentialities interact in the behavioral field (*C*). Only eight comments are reported above—each subjective, none a matter of fact—but the concourse extends to infinity.

Representative design Given the voluminous character of concourse, some strategy is required to reduce it to convenient size for purposes of systematic observation, much as a pathologist takes just a sliver of diseased tissue to place under a microscope or a space probe focuses on a circumscribed area of the galaxy. The concept that Stephenson adopted for this purpose was that of Brunswik's (1949) *representativeness*, i.e., of drawing from the concourse a sample of statements (called a *Q sample*) that is representative of the universe of discourse, analogous to drawing a sample of persons from a population. This is conventionally achieved by relying upon principles of experimental design advanced by Fisher (1935) by selecting statements from the concourse according to a specific plan, as shown for this particular illustration in Table 1, which makes explicit that we wish to include statements that are *evaluative* of the poem (i.e., positive toward it, negative, or mixed) and at the same time address common

Table 1 Q-sample structure for study of poetic interpretation

Effects	Levels			n
(A) Evaluation	(a) positive	(b) negative	(c) mixed/neither	3
(B) Barriers	(d) emotion	(e) technique	(f) sense/intent	3

barriers to understanding—e.g., appropriate or inappropriate emotional reactions, concern with poetic technique (such as meter, rhyme scheme, etc.), and sense or overt meaning. This factorial design gives rise to $3 \times 3 = 9$ combinations, namely:

(*ad*) It runs an appalling risk of sentimentality and yet seems to have escaped all offensiveness: a considerable achievement.

(*ae*) The subject matter is appealing: The picture given in the first verse is vivid and original.

(*af*) In the second verse, the poet recognizes the difference between his man's outlook and his childish outlook, and we share his experience of being "betrayed back" by "the insidious mastery—."

(*bd*) The author has attached an emotion about his mother to music that should arouse very different emotions.

(*be*) The style seems rather exaggerated.

(*bf*) The vision of a child sitting under the piano can move nothing but laughter.

(*cd*) It is curious that the poet too feels sentimentality coming upon him—"in spite of myself"—and he gives way to it entirely.

(*ce*) The rhythm emphasizes a reflective strain, but the words are sophisticated—the result is puzzling.

(*cf*) The poet is trying to get effects the whole time, to say something out of the common.

These statements constitute a single replication of the design in Table 1, and a selection of three or four statements for each of the nine combinations resulted in a representative set of $N = 30$ statements.[1] The statements are then printed on cards (one statement per card), resulting in this instance in a pack of 30 cards for purposes of Q sorting.

Q-sort technique Although Q methodology qua methodology is not widely known or understood, the Q sort itself (which is the data-gathering device associated with the methodology) is well-known and has been used in a number of fields of study, but unfortunately too often in ways contrary to the intent of its originator. The Q sort provides a way for individuals to represent their subjective points of view about any topic, e.g., about the poem in the above illustration. Given the $N = 30$ contentions about the poem, the Q sorters represent their own viewpoints, each modeled as a Q sort. In particular, each participant rank-orders the statements from "those with which I

most agree" down to "those with which I most disagree," the ranking thereby constituting each reader's operant response insofar as understanding this particular poem is concerned. To assist in this task, provision is made of a scale ranging from +4 (most agree) to –4 (most disagree), along which the statements are sorted, usually in a quasi-normal bell-shaped distribution. (For further details, consult Brown, 1993; McKeown & Thomas, 2013; Watts & Stenner, 2012.) The process is entirely subjective: the statements are conjectural (none subject to proof or refutation), hence there is no right or wrong way in which to complete the Q sort; issues of validity are therefore inconsequential.

Factor analysis Each Q sort consists of a linear vector of scores that can be intercorrelated, each correlation indicating the degree of similarity or dissimilarity between each pair of Q sorts. In the present case of poetic interpretation, $n = 8$ readers of the poem gave their interpretations in the form of a Q sort, resulting in an 8×8 correlation matrix, which was then factor analyzed using the PQMethod software program (Schmolck, 2014). The factor analysis indicated that there were three different interpretations of the poem (factors A, B, and C, as shown in Table 2), i.e., that the 30 statements had been Q sorted in three different ways.[2] Readers 1, 2, and 8 assessed the poem similarly (and therefore comprised factor A), and when their separate Q sorts were merged into a composite, statements [*a*] and [*b*] received among the highest positive factor scores:

[*a*] The simplicity, accuracy, and justness of the expression somehow alters the focus: what might have been mere sentiment becomes valuable; the strength of the underlying feeling becomes apparent through the sincerity.

[*b*] The striking thing is that the poet knows quite well that this reversion to a childhood incident is sentimental, but he does not try to make capital out of the sentiment.

These are only two of many other statements whose scores, when compared to the scores for the same statements in factors B and C, indicated that factor A enjoyed the poem and embraced statements that praised it while assigning negative scores to statements that were unfavorable. Factor B, by way of contrast, was critical of the poem as indicated by statements [*c*] and [*d*] embraced by readers 3, 4, and 5 in Table 2:

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[1] It is important to point out that the a priori structuring of Q samples is not for testing, i.e., unlike the case in rating scales, no effort is made to prove, for example, that a statement unequivocally belongs in category (*ad*). The purpose of the design in Table 1 is simply to help facilitate the drawing of a diverse set of statements from the concourse. This task can be helped along by selecting statements from each of the nine categories that are as different from one another as possible, which assists in offsetting the artificial boundaries of the design. For further details on Q-sample structuring, see Brown, Baltrinic, and Jencius (in press).

[2] Factor analysis is a topic too extensive to address in this brief summary. Detailed treatment is in Brown (1980) and in a recent discussion among Akhtar-Danesh (2016), Braswell (2016), and Brown (2016). Note that the number of factors that emerge in any study can range widely—from one only (if all participants respond in a uniform way) to a large number (if responses are more idiosyncratic)—and depends solely on the actual performances of the participants. That the studies reported in this article all produce three factors is entirely fortuitous.

Table 2 Poetic interpretations

Rs	Factor Loadings*		
	A	B	C
2	(83)	-07	-22
2	(71)	27	-04
3	-21	(68)	-21
4	-12	(67)	28
5	09	(67)	21
6	-19	-03	(57)
7	-06	31	(59)
8	(50)	(-52)	28

*Significant loadings in parentheses, decimals omitted.

[c] Its appeal is entirely sentimental, and the subject is one of the most hackneyed. Nearly every popular song deals with the same topic.
[d] In stanza 2, "the tinkling piano our guide"—"guide" I don't think a good word. Too obviously used for the sake of rhyme.

Factor C (readers 6 and 7) was likewise critical of the poem, but for different reasons than B: factor C was not bothered by the sentimentality that irritated B, but by the poet's reverence for the past. As the factor scores revealed, factor C joined B in agreeing with statement [e], but stood alone of the three factors in agreeing with [f]:

[e] A lot of emotion is being stirred up about nothing much. The writer seems to love feeling sobby about his pure childhood and to enjoy thinking of himself as a world-worn wretch.
[f] This poem is false. One worships the past in the present, for what it is, not for what it was. To ask for the renewal of the past is to ask for its destruction.

It is noted in passing that participant no. 8 is a mixed case—partially in sympathy with the factor A assessment and partially in sympathy with a view that is the opposite of factor B's evaluation of the poem (hence the negative factor loading). Factor B is not genuinely bipolar due to participant 8's mixed status. A more purely bipolar factor is discussed in the study associated with Table 6 below.

The above is just the tip of the iceberg insofar as the interpretation of the factors is concerned, but the main takeaway from a methodological standpoint is that the application of factor analysis to the responses disclosed three distinct reactions to the poem, which, like x-ray plates, served to reveal the underlying structure of the concourse and explains why it has the form and content that it does.

Summary

As a framework for the scientific study of subjectivity, the principles and operations of Q methodology run sabre and sheath with the conception of subjectivity elaborated at the outset (i.e., as the communicability of opinions and perspectives on any topic); for instance, about the meaning of a poem. All statements in the Q sample are, for the most part, matters of common knowledge and are self-referential in that one's own self is at the center of meaning: each statement takes on the meaning and salience (from +4 to –4) attributed to it by *me*, the Q sorter. The *self* is therefore an axiomatic feature of a monistic space rather than a dualistic agent that exists in mental space and that coordinates the Q-sorting in a separate behavioral space, the latter then providing evidence for inferring the former. All of the various intermingling parts—the Q statements, the various meanings of the words comprising them, the judgments of their respective saliences, the past histories of the persons performing the Q sorts, and the vagaries of the immediate situation—are part of an interacting whole, or field, in which there are no independent variables and no dependent variables, yet this field can be shown to have structure and form, as testified to by the emergence of operant Q factors. Q methodology provides the basis for an objective study of subjectivity: The Q sort as provided is itself *subjective*, but it is also *objective* in the sense that each Q sort is the participant's own, independent of whatever influences can be traced to the investigator.

Select Applications

An illustration of Q methodology applied to literary interpretation has already been presented in the course of demonstrating Q's mechanics and there is really no limit to its applicability because subjectivity permeates each and every corner of human activity. The presentations that follow are necessarily terse given space limitations and are intended merely to demonstrate the range of practical use.

Decision Making

Strategic planning Decision making usually has its origins in a problem, i.e., with a discrepancy between an actual and a desired state of affairs. The question posed to decision makers is, "What are we to do?," in response to which problem-solvers recommend various solutions, the sum total of which, in Q methodology, constitute the concourse of communicability encircling the problem under consideration. In one illustrative instance, members of a university wishing to improve the standing of their department offered suggestions such as the following:

- Reduce course loads for the most productive faculty.
- Initiate an in-service program designed to expose faculty to new ideas.
- Establish a colloquium for purposes of sharing research ideas.
- Hold an internal competition to financially reward research proposals.
- Assign graduate assistants to faculty who publish the most.

And many more, from which $N = 40$ were eventually presented in a Q sort for rank-ordering from "apt to be beneficial" (+4) to "apt to be unbeneficial" (–4). The factor analysis of the Q sorts resulted in three factors that mirrored recognizable cleavages within the department, but consensus on certain issues was also present in those recommendations that received high-positive scores across all the factors. Once presented with this undeniable evidence of agreement, a previously conflicted faculty was able to pass legislation instituting a colloquium series, to create an internal competition for research proposals, and to agree to reduce teaching loads for its most productive members (for further details, consult Durning & Brown, 2007).

Intractable problems An important conclusion that emerges from the above illustration is that the possibility for agreement is often obscured during periods of conflict until measurements render those agreements visible, and this is especially the case for intractable (or so-called "wicked") problems when Q factors are frequently bipolar, with some participants ranking the statements in virtually the reverse order of other participants. An illustration is provided by Van Eeten (2001), in which large segments of Dutch society were sharply divided over whether or not to expand the Amsterdam airport, but the application of Q methodology to stakeholders indicated to government decision makers that solutions to problems that had polarized development and environmental interests were being recommended by other Q factors that were otherwise being drowned out by the media dominance of the major parties in conflict. Widening the discussion to include the marginalized voices eased the intractability. In a related vein, Asah, Bengston, Wendt, and Nelson (2012) demonstrate the advantages of Q methodology in helping to reframe a contentious issue (the use of all-terrain recreation vehicles in state forest lands) so that conflicted parties could more clearly see the views of opponents, thereby reducing the impact of misperceptions in public discussions.

Desire and feasibility An article by Zhang, Satlykgylyjova, Almuhajiri, and Brown (2013) demonstrates how to work around a potential conflict between what is desired (as a matter of public policy) on the one hand and what is possible to achieve. In this instance, international students at a large U.S.

university were asked what changes they would wish to be instituted that would improve their academic lives. Face-to-face interviews with graduate students in a variety of academic departments produced a concourse comprised of a great many suggestions, a sampling of which, when administered as Q sorts, resulted in three factors. Factor A was mostly concerned with equity—in tuition, in on-campus work opportunities, and in graduate stipends among departments. Students comprising factor B were newly arrived in the United States and wanted the university to accommodate to their needs—for introductory information, for more qualified instructors to teach English classes, and for quiet spaces for meditation and prayer (these students were mainly from Muslim countries). Students defining factor C were interested in cultural immersion, but not assimilation: they planned to return home after college and wanted to take as many experiences and as much information as possible with them; hence, factor C was not interested in being treated equally (factor A), nor did they wish for the university to bend to their needs (factor B).

The students involved in this study had been asked to rank the statements from approve (+4) to disapprove (–4), but for their part, a group of university administrators tasked with working with international graduate students was asked to assess the same Q-sort items in terms of their *feasibility* (from +4 to –4), which resulted in a single factor indicating that administrators were largely of one mind when it came to what could realistically be done. The factor scores from the three first-order factors (A, B, and C) plus the single administrative factor were then entered into a second-order analysis that resulted in a 4×4 correlation matrix and the three second-order factors shown in Table 3.

As the second-order analysis clearly shows, what the administrators considered to be feasible was aligned primarily with the desires of the newly arrived factor B students, i.e., the first-order factors B and Admin were both strongly associated with second-order factor II: students in factor B were most in need of assistance and the administrators regarded their demands as most feasible. Administrators were not opposed to the demands of factors A and C (.30 and .27 on factors I and III, respectively), but many of those demands were simply not practical: from a political standpoint, the university could not

Table 3 2nd-order analysis

1st Order Factors	2nd Order Factors		
	I	II	III
A	**96**	–01	–04
B	–21	**87**	–02
C	–04	11	**98**
Admin	30	**72**	27

*Loadings in boldface significant; decimals to 2 places omitted.

equalize in-state and out-of-state tuitions so as to please factor A, nor could it equalize graduate-assistant stipends across all departments; it could, however, institute an academic orientation (comparable to the already existing social orientation) and establish quiet spaces in various buildings where students could meditate and pray, which were among recommendations subsequently implemented.

The number of Q-methodology studies involving stakeholder groups has risen in recent years as it has become increasingly obvious that the clarification of subjective preferences helps in reaching decisions that are regarded as legitimate by all parties involved (Brown, 2019). All three of the previous illustrations emerged from conflictual situations that made it difficult for contending parties to see the possibilities for cooperative avenues, that is, until measurements were made and opportunities for collaboration were rendered ostensible. Of course, clarifying perspectives does not guarantee cooperation and may only strengthen dissensus by making grievances more overt (e.g., Ascher & Brown, 1987; Kroesen & Bröer, 2009; Mattson, Byrd, Rutherford, Brown, & Clark, 2006; Maxwell & Brown, 1999). That said, enhancing awareness of nonconflictual possibilities enlarges the range for subsequent discussion and the operation of the voice of reason.

Scientific Creativity

William Stephenson, the inventor of Q methodology, was the last graduate assistant to Sir Charles Spearman, the inventor of factor analysis, and both men were interested in creativity— Spearman (1930) through what today would be referred to as R methodology, reaching into a central intellective factor and its measurement, and Stephenson (1985) through Q methodology, which extends into the subjectivity of mass communication and advertising.[3] This is of importance inasmuch as Morçöl (2007) has asserted that "Q methodology is not designed to measure or facilitate creativity" (p. 576), but surely the opposite is the case, as Thompson (2010) has concluded: ". . . Q-technique factor analysis is especially suitable for inquiry about giftedness and creativity" (p. 33).

Contrary to Morçöl's claim, a few instances already exist of the use of Q methodology in both the measurement and facilitation of creativity (e.g., Keignaert, 2011; Lynch & Kaufman, 1974; Muñoz-Blanco & Padilla Vargas, 2017; Rutherford, 2014; Tan, Luh, & Kung, 2014; Tan, Tan, Luh, & Kung, 2016), including a detailed study by Tolbert (2017) focused on encouraging the use of creativity and intuition in the counseling supervisory relationship. The Q-sample structure that was eventually employed in Tolbert's research is shown in

Table 4 and sets creativity against both intuition and logic in a 3×4 factorial design that also involved the so-called "four Ps" of creativity: product, person, process, and place. Statements were drawn primarily from the scholarly literature and then revised where necessary to be more apropos the standpoint of those involved in the supervision of counselors, and four statements were then drawn from the $3 \times 4 = 12$ combinations of the design for a Q sample of size $N = (3)(4)(4) = 48$, examples of which are as follows:

(cg) If I stay in the same physical location doing the same role, I can lose my ability to think outside the box. I may become confined in my ways of thinking and acting.
(af) The ability to see differently helps me to be innovative, especially if I am open to the possibilities of doing something different or of seeing alternatives.
(bd) My breakthroughs in supervision occur more frequently when I encounter the strange and unfamiliar.
(ce) I often spend time developing my imperfect skills while I leave my perfected skills to the side. Constant learning is essential for my development.

As noted previously, reliance on the formal structure in Table 4 carries no pretensions of validity or reliability comparable to what is claimed of items in rating scales, and it is due in large part to this misunderstanding that led Block (2008) and others to issue criticisms. The main purpose of the Q-sample structure is to assist the investigator in reducing the unwieldy volume of statements in the concourse down to a workable number (the Q sample) so as to enable observation and analysis (Brown et al., in press). In a science of subjectivity, what matters is not what the statements are asserted to mean a priori, which conveys an air of objectivity, but what subjective meanings the participants project onto them in the course of their Q sortings, i.e., on the pristine character of their operant responses.

In this instance, a set of $n = 20$ counselor supervisors provided Q sorts representing the ways in which they carry out their roles, and the results condensed into three Q factors, two of which were judged to incorporate a significant degree of creativity in their role performance. Persons comprising factor A, for instance, embraced the following statements when describing how they fulfilled their position:

Table 4 Q-sample structure for creativity*

	[a]Creativity	[b]Intuition	[c]Logic
[d]Person	ad	bd	cd
[e]Product	ae	be	ce
[f]Process	af	bf	cf
[g]Place	ag	bg	cg

*From Tolbert (2017, p. 78)

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[3] Stephenson was distinguished professor of advertising research in the University of Missouri School of Journalism, and he and many of his students were deeply involved in the creative side of advertising, as in campaign themes and imagery, e.g., in the naming of the Studebaker Lark automobile (Stephenson, 1979, 1985).

If something is not working, then something new should be tried. "We've always done this" is not a good reason to continue on a path. I try to reframe problems to generate new possibilities so I can experiment to see what works best for the situation at that time. . . . I try to be courageous in the face of past and potential failures because failures help me learn. I believe transgression, persistence, and creative discontent help to solve problems; however, I recognize that such practices entail the possibility of failing again. . . . I have to trust both my gut and know-how to be the most effective supervisor I can be. I cannot rely on just one or the other. . . . The ability to see differently helps me to be innovative, especially if I am open to the possibilities of doing something different or of seeing alternatives.

Hence, factor A does not stick with the tried and true, is not afraid to fail, trusts in gut reactions, and is willing to see things in a different light while providing supervision to counselors. Moreover, this group of supervisors rejects the following statements:

I prefer questions that have right answers. That way, I know what I have to do to succeed. . . . I am suspicious of rapid cognition and intuition. I have found that time and effort must go into the making of any and all decisions.

The factor A supervisor does not believe that every problem has a single right answer and that arriving at solutions must of necessity be prolonged and arduous. It should be noted that Tolbert (2017) supplemented the Q sorts with post-sorting interviews during which participants were enabled to elaborate on their styles of supervision, thereby adding narrative evidence of the involvement of creative and intuitive dimensions.[4]

Factor B's philosophy of supervision was likewise open to influences involving a mingling of intuition and creativity, as indicated in those statements to which this group of individuals assigned the highest scores:

I try to use intuition as a guide, a tool, a relationship builder, and an additional source of intel in my work. . . . I have to trust both my gut and know-how to be the most effective supervisor I can be. I cannot rely on just one or the other. . . . Intuition tells me where to look next for the answers I seek. . . . I find all forms of creativity to

have merit, regardless of whether the form is tangible or intangible, or a product, person, process, or place.

A third factor was also in evidence in the data, but inspection of the factor scores indicated that it placed less emphasis on creativity and so was dropped from further consideration. Tolbert's (2017) strategy from the outset was not to place exclusive emphasis on the emergent Q factors themselves, but to use Q as a screening device for selecting participants for a more detailed grounded-theory analysis. Q methodology in this instance provided the valuable service of demonstrating the existence not of a single creative approach, but of multiple orthogonal approaches for more thorough inspection. In particular, relatively pure cases of creative/intuitive thinking (based on the magnitude of loadings on factors A and B) were selected for more in-depth grounded theory interviews designed to clarify the consequences of creativity in the counseling–supervisory relationship.

Program Evaluation

A college of education had for years been hosting outstanding high school teachers from abroad (under the sponsorship of the U.S. Department of State) who spent a semester taking courses at the college, visiting area high schools, learning about the latest technologies, and forging plans for implementing what they had learned once they returned to their respective homelands. After a suitable length of time, these international teachers were queried about how they had progressed by responding to a questionnaire containing a number of prompts—What challenges did you face? How did you overcome these challenges? What successes have you experienced? What recognitions have you received? and so forth—to which each of the program alums responded in an open-ended way. During the course of a decade, hundreds of comments had been collected (and dutifully stored in Excel files) and concern had mounted about how to make sense of all of this narrative information (of a highly subjective and often idiosyncratic kind) and reach conclusions about the effectiveness of the program and how it might be improved.

All of this verbiage, of course, is what we now recognize as a concourse of subjective communicability about "what happened to me when I returned home and tried to implement all of the new ideas and technologies to which I had been introduced," and the task was one of imposing systematics onto this inchoate mass of thoughts and expressions. Inasmuch as the theme of the program was one of educational leadership, it was determined that the well-known leadership framework of Kouzes and Posner (1987), as summarized in Table 5, could provide a useful beginning. Given the more than 500 statements of opinion abstracted from the alums' essays, an initial step was taken to determine the extent to which each statement comported with one or the other of Kouzes and Posner's five

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[4] It is also worth noting that Tolbert (2017) supplemented the set of 20 empirical Q sorts with theoretical Q sorts (e.g., a Q sort simulating pure creative thought, another simulating pure intuitive thought, and another pure logical thought) that served as conceptual templates in the resulting factor matrix.

leadership practices—of modeling the way, inspiring vision, challenging the process, enabling others, and "encouraging the heart" through recognition and celebration. Once the statements were distributed among the five practices, decisions were then made concerning into which of the two commitments each statement best fit. Five statements were eventually taken from each of the 10 categories to comprise a Q sample of $N = 50$, with the following displaying one replication of the design in Table 5:

Clarify values: I have become more tolerant and respectful of others' point of view.
Set the example: I am more willing to try new approaches to teaching.
Envision the future: Teachers, faculty, and students are now more aware of the importance of integrating technology into the classroom.
Enlist others: I have tried to incorporate new technology into my work and have urged colleagues to become involved in our growing ICT culture.
Search for opportunities: I have tried to advance my ideas by becoming more involved with teachers and professional organizations.
Experiment and take risks: I teach about other cultures in an effort to encourage educational paradigm shifts.
Foster collaboration: I am now able to help teachers and even the government in building international relationships for improving education.
Strengthen others: I have been successful in stimulating critical and reflective thinking about teaching practices among my colleagues.
Recognize contributions: I seem to have created interest in technology integration and am viewed as a champion for these new ideas.
Celebrate values and victories: I have been fortunate to be supported by administrators who have given me the opportunity to share my new ideas.

Given that the program alums were spread around the globe, Q sorts were obtained using an online platform and more than 40 responses were collected, the factor analysis of which resulted in three factors. Factor A was populated by alums from a number of countries (Bangladesh, Brazil, Ghana, India, Indonesia, Morocco, Philippines), but what tied them together was obviously not country of origin, but their enthusiasm for technology and their autonomy as teachers in educational environments that were far from encouraging. Note, for example, some of factor A's most highly embraced statements (scores to the left for factors A, B, and C, respectively):

Note that factor A is joined by factor C when it comes to enthusiasm for teaching in general (e.g., statement Nos. 6, 11,

17), but only factor A is enthusiastic about technology (Nos. 2, 4, 16). But factor A's personal autonomy (unsupported by

+4	0	–2	(2)	I have tried to incorporate new technology into my work and have urged colleagues to become involved in our growing ICT [information and communications technology] culture.
+4	+1	+3	(6)	I am more willing to try new approaches to teaching.
+4	0	+4	(17)	I have developed the strength to face challenges in my workplace and use that strength to help others.
+3	+1	–3	(4)	I am happy to be able to share my experiences with colleagues and students and glad to see them improve in using technology.
+3	–2	+3	(11)	More than before, I now tend to suggest creative solutions.
+3	–3	–3	(16)	I seem to have created interest in technology integration and am viewed as a champion for these new ideas.

the environment) comes to light in terms of those statements with which these individuals disagree:

Back in their home countries, factor A alums have been successful in incorporating new technologies into their own activities and have come to be regarded as technological champions, but as a measure of their personal autonomy, they

–4	–4	+2	(21)	I am invited to speak to other schools and teachers about my knowledge and experiences.
–4	+3	0	(29)	Implementing new technology in the classroom requires overcoming multiple challenges at the individual and system levels.
–4	–4	–2	(36)	I have been fortunate to be supported by administrators who have given me the opportunity to share my new ideas.
–3	–1	–1	(40)	I have been successful in stimulating critical and reflecting thinking about teaching practices among my colleagues.

seem to have received little in the way of encouragement: they have not been invited to speak about their new knowledge (No. 21), have not been supported by administrators (No. 36), and have not been successful in influencing their colleagues. Their professional gratifications have apparently been acquired primarily through interpersonal relations (No. 4).

For the former program participants comprising factor B, the program experience was important from the standpoint of personal growth and empowerment. The PQMethod software program singles-out statements that distinguish each factor

Table 5 Q-sample structure (from Kouzes and Posner)

Practices	Commitments	
1. Model the Way	Clarify values	Set the example
2. Inspire a Shared Vision	Envision the future	Enlist others
3. Challenge the Process	Search for opportunities	Experiment and take risks
4. Enable Others to Act	Foster collaboration	Strengthen others
5. Encourage the Heart	Recognize contributions	Celebrate values and victories

from the others, and those statements to which factor B gave significantly higher scores than did factors A and C indicate that B more than the others returned home a more fully developed person:

> (34) The program empowered me to dream bigger and opened me to the reality that, as an educator, I have a lot to learn and a lot to share, too. . . . (46) I have learned to be a risk-taker—to move out of my comfort zone and be willing to "jump into the fire." This is how you find out whether you can make mistakes and know how to fix them. . . . (48) I look for opportunities to share my new ideas, materials, and teaching strategies with colleagues by opening dialogue with them in meetings and informal discussions. . . . (43) I am anxious to participate in projects with other educators or others in the alumni network.

Although empowered and anxious to open a new chapter of professional life, factor B also reveals a realistic awareness of potential challenges (both interpersonal and organizational) that stand in the way. Like factor A, factor B is also largely bereft of institutional and collegial support and therefore appears optimistic but at the same time uncertain about how to direct that optimism.

The factor scores indicate that factor C has experienced the most success of the three factors, having been recipient of awards and invitations to speak and having enjoyed opportunities to be of assistance to students, colleagues, and government agencies. From the standpoint of implementation, therefore, these factor C program alums are probably in least need of additional assistance from program administrators.

The purpose of this program evaluation was to clarify the different kinds of experiences that program participants had upon return to their home institutions, of which analysis has identified three. This condensation constitutes a remarkable simplification when compared to the mountain of undifferentiated commentary initially contained in the questionnaire responses from prior program graduates. What Q methodology brings to program evaluation is *synthesis*. Responses to questionnaire scales, whether closed- or open-ended, constitute discrete reactions of unknown connection to other reactions, but the relative importance of each within a particular

perspective becomes apparent when these responses are placed in a Q sort, which then enables them to become synthesized into an overall point of view. Once each viewpoint is rendered in the form of a Q sort, factor analysis then reveals the different types that are inherent in the program experience, and these types then point in the direction of the next steps that might be taken in program development. In the above illustration, for example, those program alumni comprising the successful factor C can be left to proceed under their own steam while attention can then be directed to the more troubled factors A and B and to programmatic efforts that might be directed toward rendering their efforts at implementation more successful.

Intensive Analysis of Single Cases

One of the features of Q methodology of which few users take advantage is its capacity systematically to examine single cases and to apply the penetrating power of factor analysis to the study of individual lives. Take as an example the issue of mindfulness and of the increasing concern with solitude in contemporary life. In this illustrative case, a short essay by Nance and Mays (2013) covered many of the essentials and had the virtue of reporting the views of actual interviewees that served as a concourse from which comments such as the following were drawn:

- I find solitude beneficial and necessary for my well-being. [*positive*]
- I must confess that I have a somewhat negative view of people who spend time alone by choice—the loners, the odd birds, the hermits. [*negative*]
- I feel there are benefits from being socially interconnected. [*interconnectedness*]
- The lines between being by myself and being with others have blurred. [*mixed*]

And so forth, with the four categories in brackets suggesting themselves. Five of each were selected to approximate representativeness, for a Q sample of $N = 20$, which is smaller than usual, but adequate for purposes of the following demonstration.

A single, middle-aged, male student was instructed to operate with the Q sample under several *conditions of instruction*. *First*, he was invited to Q sort the statements from "most agree" (+3) to "most disagree" (–3) in the usual prescribed, quasi-normal distribution. *Second*, he was asked to perform a Q sort as he imagined would be the prevalent view in society, given that theory often holds that individuals tend to seek out solitude as a way to withdraw from a noisier and more boisterous social world. *Third*, he provided what he regarded as the best possible view he might have about solitude. *Fourth* was based on a memory of the most "loud-mouthed" person he had ever known and what that person's view of solitude probably was. *Fifth* was what he guessed his view of solitude would be 20 years hence. *Sixth* was projective: what he thought that others, in general, perceived his view to be. *Seventh* (as a corollary to no. 5) was what he recalled that his view was when he was half his current age. *Eighth* (similar to no. 4), he was asked to recall the person who he had admired most, and to represent as a Q sort what he imagined that person's view of solitude might be. *Ninth*, a couple of weeks later he was asked for his own personal view again, as a kind of check on reliability or for evidence of any change that might have occurred since the beginning of the experiment.

The 9 × 9 correlation matrix that this person's performances created was factor analyzed, resulting in the structure shown in Table 6, which shows a bipolar factor A—with the loud person (no. 4) being pictured as the opposite of the self (no. 1)—plus two other factors. Factor A also contains this person's ideal (no. 3), which suggests a degree of self-acceptance, the person's personal view being regarded as to some extent an ideal view; it also contains the person's view of the future, indicating an intention to maintain the current view. We can see in the factor scores what this ideal-self view looks like, the following receiving the highest positive scores:

Table 6 Operant factors

Conditions		A	B	C
1.	Self-1	**80**	11	–03
2.	Society	06	22	**90**
3.	Ideal	**75**	–28	05
4.	Loud	**–68**	08	10
5.	Future	**85**	–07	20
6.	Others	–36	**85**	02
7.	Past	23	**78**	22
8.	Admire	**95**	–11	13
9.	Self-2	**96**	15	00

Factor loadings in bold significant ($p < .01$); decimals to two places omitted.

[a] With solitude, I get a better sense of who I am and why I do some of the things I do. . . . [b] I find solitude beneficial and necessary for my well-being. . . . [c] To maximize my potential, I need time alone to process what has happened when I have been with others. . . . [d] I need time for centering myself—for reflection, stress relief, and my overall mental health. . . . [e] I feel there are benefits from being socially interconnected.

There is healthiness in this viewpoint: not an escape, but a temporary withdrawal to think things over before returning to social engagement (statement [c]), which is also viewed as beneficial (statement [e]). This person may have had a mentor who modeled this kind of healthy demeanor (Q sort no. 8). What this person regards as *not me* (scores –3, –2) are statements that are simultaneously thought to positively characterize the loud-mouth (no. 4), who is apparently something of a negative role model:

[f] The lines between being by myself and being with others have blurred. . . . [g] There's a possibility of kind of losing my grip on reality if I don't have regular interactions with people. . . . [h] I feel pressured to be more interconnected, perhaps due to the popularity of social media. . . . [i] I would consider it almost a badge of oddness if I sought out solitude. . . . [j] I must confess that I have a somewhat negative view of people who spend time alone by choice—the loners, the odd birds, the hermits.

This loudmouth is perceived as a person who desperately clings to other people (statement [g]), whose boundary between self and society is somewhat blurred and enmeshed (statement [f]), who feels pressured to belong (statement [h]) and is dismissive of those who do withdraw (statements [i] and [j]), and it is this self-view that the Q sorter rejects.

Factor B is also a part of this person and represents how he thinks that others view him (no. 6, Table 6) and what he recalls having been his view of solitude in years past (no. 7). This view of his previous self includes not only the following statements, but also [e] and [f] from the present and not-self, which indicates a degree of continuity between past, present, and future:

[k] It's not like me to actively make time to be by myself. I do not intentionally seek out solitude. . . . [l] Due to social media, I now find it possible to be in contact with other humans to some degree at almost any time. . . . [m] I don't really feel alone when texting or chatting on Facebook.

The past self of factor B was more gregarious and non-introspective than factor A, and this person apparently thinks that others for the most part still see him in this way. There may have been an epiphany in the past, or possibly the influence of a significant other (e.g., no. 8) that led this person to his current position, i.e., to abandon factor B and to adopt factor A as a way of life instead. The fact that this person thinks that others regard him as outwardly like factor B offers the possibility that B serves as a persona—perhaps a protective garb giving factor A more room to exist.

Note in passing that there is also a factor C that is defined solely by this person's view of what society's stance on solitude is, but description of the first two factors alone is sufficient to enable a return to more abstract considerations. In this regard, Stephenson (1974, 1980) has proposed at least a dozen *Laws of Subjectivity*, of which the following six are most clearly evident in the factor structure in Table 6:

- *James's Law* (named after William James), to the effect that some things are *me* and others *mine* only. In this instance, this person's conception of his ideal (no. 3) and what he expects his view will be in the future (no. 5) are *him* due to the fact that they occupy the same factor as his self (no. 1): they are self-embraced. On the other hand, what he thinks that others regard his view to be (no. 6) and what his view was in the past (no. 7) are *his* only; that is, they are his own cognitions, which he produced through his own Q sortings, but they are on factor B and not the self factor A. He does not identify with them: They are not *me*, only *mine*.
- *Rogers's Law* (named after Carl Rogers), to the effect that self (no. 1) and ideal (no. 3), will be congruent under conditions of adjustment, as they are in this instance: both are defining for the same factor.
- *Shibutani's Law* (named for Tamotsu Shibutani), to the effect that we are influenced by significant others, who serve as models for emulation or disdain; hence, this person identifies positively with no. 8 and negatively with no. 4, both of whom are strongly associated with self factor A and likely have been influential in his thinking about how he wants to be and not be.
- *Perlin's Law* (named for Seymour Perlin), that changes can only occur in terms of self-related factors. Hence, this person was likely only able to transition to factor A (from his past in factor B) due to an admired person (no. 8) who was idealized (no. 3)—and a loudmouth (no. 4) who was counteridealized—each of whom lighted the way so that this person could see how to change from factor B (no. 7) to factor A (no. 1).
- *Taylor's Law* (named for Donald M. Taylor), that self descriptions tend to be consistent through time: Witness the fact that this person's self descriptions at time-1 (no. 1)

and at time-2 (no. 9) are both defining for factor A, suggesting a high degree of consistency during at least this brief time span, despite the fact that there is a significant difference between $t_1 = .80$ and $t_2 = .96$ on factor A ($z = 2.35$, $p < .05$) in this particular instance.
- *Freud's Law* (named, of course, for Sigmund Freud), to the effect that self-referred factors will be defended. This law would be in evidence were this person's view of how others see him (on factor B, separate from the way in which he views himself on factor A) judged to be a social pretense maintained for protective purposes.

Strong cultural influences have led social theorists to search for explanations for social behaviors by "researching beneath the surface" (Clarke & Hoggett, 2009) for variables and processes that can account for observations on the surface. In most instances, these efforts depend upon strategies such as introspection, discourse and narrative analysis, free association, countertransference, projective tests, fMRI, and questionnaires along with social-scientific scales (such as MMPI, 16 PF, F-Scale, etc.) that are assumed to provide evidence on the surface that can then be used as peep-holes into the machinery below. Table 6 can be thought of in this dualistic way, of course, but it is wholly unnecessary. This person's Q sortings were a function of everything that he is—his cognitions, his emotions, his moods, his life history, all of his independent and dependent variables, his physiology, his conscious and preconscious and unconscious systems, his right brain and left brain, etc. . . . ad infinitum: everything. The factors that emerged (factors A, B, and C) simply document his different response functions (Kantor's *rf*; see above) that came into interactive play in relation to the stimulating features of the different conditions, just as light can display granular or undulating properties depending on conditions. He may be unaware of the factor structure that his own Q sortings produced and this may be taken as evidence of a psychoanalytic unconscious, but this is an *explanation* of behavior and not the behavior itself, and it is neither necessary nor sufficient. The value of theories such as psychoanalysis (or any other) is not as an explanation, but as a source of propositions whose testing can lead to interesting findings (e.g., McKeown, 1977).

Conclusions

Definitions have been given, principles asserted, and examples presented, and we return full circle to essentials, namely, that subjective communicability is the very stuff of life as it is lived, and that it is about ordinary things—such as our views about politics, religion, work, leisure time, domestic matters, popular culture, and so forth—and Q methodology endeavors to observe all of this as it naturally occurs. Rating scales, by

way of contrast, are usually not about ordinary things, but about such matters as attention deficit, bipolar disorder, fascist potential, FoMO (fear of missing out), neuroticism, reading ability, and hundreds of other traits and characteristics that are not a part of common parlance save in the clinic, lab, and halls of science. Endeavors such as these often invite verbal responses in response to scale statements, but only as indicators of something that is objective about the person, e.g., that the person is anxious, extraverted, liberal, or the like. Subjectivity, in sum, is natural behavior and Q methodology is its natural science (Brown, 2006; Midgley & Delprato, 2017).

Q methodology is also to be distinguished in part from cognitive psychology, phenomenology, and related systems of inquiry to the extent that they approach subjectivity *reflectively*, not as it is lived by the person living it (i.e., from that person's vantage point), but as an object of observation, thereby transforming it. As Feyaerts and Vanheule (2015) note, strategies that try to view subjectivity by reflecting upon it as if from the outside are always a step too late because the essence of subjectivity disappears the moment it is looked upon as an object: it's like turning a flashlight on in hopes of catching a glimpse of what a dark room looks like. Kierkegaard was making a similar point when he remarked that it is one thing to prove the existence of God and quite another to fall to one's knees and give thanks. To engage in the one is to preclude the other.

When an individual is performing a Q sort, however, what is at issue is not reflection, but *expression*, i.e., the person is caught in the act of expressing a viewpoint (or perspective, or attitude, etc., however this event might be labeled) in the form of a Q sort.[5] The Q sorter is not being introspective or inwardly consultative, but is overtly engaging in self-referential utterances of the kind exemplified in the studies above, namely:

- "The first verse of the poem is vivid and original."
- "We should assign graduate assistants to faculty who publish the most."
- "I have to trust both my gut and know-how to be the most effective supervisor I can be."
- "I am more willing to try new approaches to teaching."
- "I do not intentionally seek out solitude."

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[5] Teo (2017) does not approve of the term *perspective*, asserting that "understanding subjectivity as a *perspective* is too 'mental' and that there are good reasons to refer to subjectivity as a first-person *standpoint*" (p. 283), but this is only semantics. There is nothing especially mental about a perspective, or vantage point, which is comparable to a frame of reference, or coordinate system, in relativity theory (Brown & Taylor, 1973). And if the person is asked to "provide a Q sort as you think your spouse would perform it," the Q sort then becomes third person.

Subjectivity is irreducible and not subject to reductionism of a psychoanalytic, social constructivist, Marxian, cognitive, or any other kind. Or, if it is so reduced, it is transformed as a phenomenon—even worse, is killed off in the course of its dissection—and becomes a defense mechanism or a social construction or a socioeconomic fiction (such as false consciousness) or a cognitive bias or a manifestation of some other more fundamental force and not a person's own point of view at all and consequently unworthy of examination as behavior to be inspected and understood in its own right. Social scientists who claim (or imply) that what a person says is of value only insofar as it implicates or is indicative of variables or dimensions of greater intrinsic importance—and that the latter alone are of scientific value—do not appear to realize that what they are saying is self-referential and itself part of a concourse of subjective communicability in which they are fully involved, and furthermore seem to assume that they are somehow different from those whom they study.

As far as Q methodology itself is concerned, it is difficult to imagine another approach that stands on firmer scientific grounds insofar as the study of subjectivity is concerned. It is founded on concourses most frequently gathered from the mouths of persons who are expressing themselves, the selection of Q samples is based on modern advances in experimental design, the Q sort enables participants to take for granted their own meanings and assign their own saliences, and the mechanics of correlation and factor analysis assists in bringing the operant structures to light for consideration (Stephenson, 1977; the range and shape of the Q-sort distribution are the only arbitrary impositions, but these have no impact on the subsequent factors). In contrast, devices such as projective tests permit persons the freedom to speak their own minds, but what they have to say is then usually taken by the scientist to be indicative of something else (e.g., nAchievement, nNurturance, and the like), and even more open-ended strategies, such as discourse and narrative analysis, typically end up with the investigator imposing categories onto the raw verbiage that has been collected or looking for specific effects, such as status inequities among participants or evidence of specific emotions or cognitions (Hepburn & Jackson, 2009). In other instances, the narrative is rearranged by the investigator in arbitrary ways. Willis (2019), for instance, seeks to construct "composite narratives" by piecing together snippets from several actual narratives, the aim being to tell a single story that subsumes the others, but the piecing together could have been accomplished in a variety of different ways. Willis's logico-categorical strategy finds its parallel in Q methodology in the application of factor analysis, which also results in composites (Q factors), but composites based on nonarbitrary combinations whose functional similarities can be vouchsafed. Unlike Willis's categories, the factors in Q methodology serve like x-ray plates that reveal the structural features in the communicability of individuals, groups, and cultures.

Availability of Data and Materials Data on decision making and scientific creativity are in the possession of the authors of those studies cited. Data on poetic interpretation and program evaluation are in the possession of the author. Data on the single case (on solitude) are unavailable due to confidentiality.

Compliance with Ethical Standards

Conflict of Interest The author declares that there is no conflict of interest.

Informed Consent Informed consent was obtained from all individual participants included in the studies.

References

Akhtar-Danesh, N. (2016). An overview of the statistical techniques in Q methodology: Is there a better way of doing Q analysis? *Operant Subjectivity, 38*(3–4), 29–36.

Asah, S. T., Bengston, D. N., Wendt, K., & Nelson, K. C. (2012). Diagnostic reframing of intractable environmental problems: Case of a contested multiparty public land-use conflict. *Journal of Environmental Management, 108*, 108–119.

Ascher, W., & Brown, S. R. (1987). Technologies of mediation: An assessment of methods for the mediation of international conflicts. In H. Chestnut (Ed.), *Contributions of technology to international conflict resolution (Proceedings, International Federation of Automatic Control)* (pp. 95–103). Oxford, UK: Pergamon Press.

Bambery, M., & Porcerelli, J. (2010). Q-methodology. In I. B. Weiner & W. E. Craighead (Eds.), *The Corsini encyclopedia of psychology* (Vol. 3, 4th ed., pp. 1401–1403). New York, NY: John Wiley.

Block, J. (2008). *The Q-sort in character appraisal: Encoding subjective impressions of persons quantitatively.* Washington, DC: American Psychological Association.

Braswell, B. (2016). Fit for purpose? A response to "An overview of the statistical techniques in Q methodology." *Operant Subjectivity, 38*(3–4), 42–45.

Brown, S. R. (1980). *Political subjectivity: Applications of Q methodology in political science.* New Haven, CT: Yale University Press.

Brown, S. R. (1993). A primer on Q methodology. *Operant Subjectivity, 16*, 91–138.

Brown, S. R. (2006). Q methodology and naturalistic subjectivity. In B. D. Midgley & E. K. Morris (Eds.), *Modern perspectives on J. R. Kantor and interbehaviorism* (pp. 251–268). Reno, NV: Context Press.

Brown, S. R. (2016). More than just a research tool: A comment on "An overview of the statistical techniques in Q methodology." *Operant Subjectivity, 38*(3–4), 37–41.

Brown, S. R. (2019). Q methodology in research on political decision making. In D. P. Redlawsk (Ed.), *Oxford encyclopedia of political decision making.* New York, NY: Oxford University Press.

Brown, S. R., Baltrinic, E., & Jencius, M. (in press). From concourse to Q sample to testing theory. *Operant Subjectivity.*

Brown, S. R., & Good, J. M. M. (2010). Q methodology. In N. J. Salkind (Ed.), *Encyclopedia of research design* (Vol. 3, pp. 1149–1155). Thousand Oaks, CA: Sage.

Brown, S. R., & Mathieson, M. (1990). The operantcy of practical criticism. *Electronic Journal of Communication/La Revue Electronique de Communication, 1*(1). Retrieved from http://www.cios.org/www/ejc/v1n190.htm

Brown, S. R., & Taylor, R. W. (1973). Frames of reference and the observation of behavior. *Social Science Quarterly, 54*, 29–40.

Brunswik, E. (1949). Systematic and representative design of psychological experiments. In J. Neyman (Ed.), *Proceedings of the Berkeley Symposium on Mathematical Statistics and Probability* (pp. 143–202). Berkeley and Los Angeles, CA: University of California Press.

Clarke, S., & Hoggett, P. (2009). Researching beneath the surface: A psycho-social approach to research practice and method. In S. Clarke & P. Hoggett (Eds.), *Researching beneath the surface: Psycho-social research methods in practice* (pp. 1–26). London, UK: Routledge.

Dewey, J., & Bentley, A. F. (1949). *Knowing and the known.* Boston, MA: Beacon Press.

Durning, D. W., & Brown, S. R. (2007). Q methodology and decision making. In G. Morçöl (Ed.), *Handbook of decision making* (pp. 537–563). New York, NY: CRC Press.

Feyaerts, J., & Vanheule, S. (2015). How to return to subjectivity: Natorp, Husserl, and Lacan on the limits of reflection. *Theory & Psychology, 25*, 753–774.

Fisher, R. A. (1935). *The design of experiments.* Edinburgh, UK: Oliver & Boyd.

Hayes, L. J., & Fryling, M. J. (2018). Psychological events as integrated fields. *Psychological Record, 68*, 273–277.

Hepburn, A., & Jackson, C. (2009). Rethinking subjectivity: A discursive psychological approach to cognition and emotion. In D. Fox, I. Prilleltensky, & S. Austin (Eds.), *Critical psychology: An introduction* (2nd ed., pp. 176–194). London, UK: Sage.

Kantor, J. R. (1959). *Interbehavioral psychology: A sample of scientific system construction (2nd rev. ed.).* Granville, OH: Principia Press.

Keignaert, K. (2011). *On the dialectics of urbanicity and creative agency: Theorizing their relationship with a methodological application to Amsterdam and Antwerp.* (Doctoral thesis, Universiteit Antwerpen, Antwerp, Belgium).

Kouzes, J., & Posner, B. (1987). *The leadership challenge: How to get extraordinary things done in organizations.* San Francisco, CA: Jossey-Bass.

Kroesen, M., & Bröer, C. (2009). Policy discourse, people's internal frames, and declared aircraft noise annoyance: An application of Q-methodology. *Journal of the Acoustical Society of America, 126*, 195–207.

Lewis, C. S. (1960). *Studies in words.* Cambridge, UK: Cambridge University Press.

Lynch, M. D., & Kaufman, M. (1974). Creativeness: Its meaning and measurement. *Journal of Reading Behavior, 6*, 375–394.

Mattson, D. J., Byrd, K. L., Rutherford, M. B., Brown, S. R., & Clark, T. W. (2006). Finding common ground in large carnivore conservation: Mapping contending perspectives. *Environmental Science & Policy, 9*, 392–405.

Maxwell, J. P., & Brown, S. R. (1999). Identifying problems and generating solutions under conditions of conflict. *Operant Subjectivity, 23*, 31–51.

McKeown, B. F. (1977). Identification and projection in religious belief: A Q-technique study of psychoanalytic theory. In T. Shapiro (Ed.), *Psychoanalysis and contemporary science* (Vol. 5, pp. 479–510). New York, NY: International Universities Press.

McKeown, B. F., & Thomas, D. B. (2013). *Q methodology (Quantitative Applications in the Social Sciences, Vol. 66, 2nd ed.).* Thousand Oaks, CA: Sage.

Midgley, B. D., & Delprato, D. J. (2017). Stephenson's subjectivity as naturalistic and understood from a scientific perspective. *Psychological Record, 67*, 587–596.

Morçöl, G. (2007). Methods of assessing and enhancing creativity for public policy decision making. In G. Morçöl (Ed.), *Handbook of decision making* (pp. 565–585). Boca Raton, FL: CRC Press.

Muñoz-Blanco, M. I., & Padilla Vargas, M. A. (2017). Utilizing Q-methodology for the study of the behavior of the audience of creativity. *International Journal of Psychological Studies, 9*(2), 67–81.

Nance, Z., & Mays, M. (2013). Exploring the role of time alone in modern culture. *VISTAS Online*, Article 56, 6 pp.

Noë, A. (2009). *Out of our heads: Why you are not your brain, and other lessons from the biology of consciousness*. New York, NY: Hill & Wang.

Richards, I. A. (1929). *Practical criticism: A study of literary judgment*. London, UK: Routledge & Kegan Paul.

Rutherford, S. E. (2014). *Teaching and learning jazz music improvisation: An investigation of approaches using Q methodology.* (Doctoral thesis, Simon Fraser University).

Sabini, J. B., & Silver, M. (1982). Some senses of subjective. In P. F. Secord (Ed.), *Explaining human behavior: Consciousness, human action and social structure* (pp. 71–91). Beverly Hills, CA: Sage.

Schmolck, P. (2014). PQMethod software (2.35). Retrieved from http://schmolck.userweb.mwn.de/qmethod/#PQMethod

Skinner, B. F. (1953). *Science and human behavior*. New York, NY: Macmillan.

Skinner, B. F. (1975). The steep and thorny way to a science of behavior. *American Psychologist, 30*, 42–49.

Smith, N. W. (2006). The interbehavioral field. In B. D. Midgley & E. K. Morris (Eds.), *Modern perspectives on J.R. Kantor and interbehaviorism* (pp. 87–110). Reno, NV: Context Press.

Smith, N. W. (2016). *The myth of mind: A challenge to mainstream psychology and its imposed constructs. St*. Petersburg, FL: BookLocker.com.

Spearman, C. (1930). *Creative mind*. Cambridge, UK: Cambridge University Press.

Stephenson, W. (1953). *The study of behavior: Q-technique and its methodology*. Chicago, IL: University of Chicago Press.

Stephenson, W. (1974). Methodology of single case studies. *Journal of Operational Psychiatry, 5*(2), 3–16.

Stephenson, W. (1977). Factors as operant subjectivity. *Operant Subjectivity, 1*, 3–16.

Stephenson, W. (1978). Concourse theory of communication. *Communication, 3*, 21–40.

Stephenson, W. (1979). Homo ludens: The play theory of advertising. *Rivista Internazionale di Scienze Economiche e Commerciali, 26*, 634–653.

Stephenson, W. (1980). Consciring: A general theory for subjective communicability. In D. Nimmo (Ed.), *Communication yearbook 4* (pp. 7–36). New Brunswick, NJ: Transaction Books [Reprinted: *Operant Subjectivity*, 2007, *30*, 89–136].

Stephenson, W. (1984). Perspectives on Q methodology: II. Monistic protopostulate of communicability. *Operant Subjectivity, 8*, 2–5.

Stephenson, W. (1985). Perspectives on Q methodology: III. A creative nexus. *Operant Subjectivity, 8*, 37–41.

Tan, S.-K., Luh, D.-B., & Kung, S.-F. (2014). A taxonomy of creative tourists in creative tourism. *Tourism Management, 42*, 248–259.

Tan, S.-K., Tan, S.-H., Luh, D.-B., & Kung, S.-F. (2016). Understanding tourist perspectives in creative tourism. *Current Issues in Tourism, 19*, 981–987.

Teo, T. (2017). From psychological science to the psychological humanities: Building a general theory of subjectivity. *Review of General Psychology, 21*, 281–291.

Thompson, B. (2010). Q-technique factor analysis as a vehicle to intensively study especially interesting people. In B. Thompson & R. F. Subotnik (Eds.), *Methodologies for conducting research on giftedness* (pp. 33–52). Washington, DC: American Psychological Association.

Tolbert, Y. R. (2017). *Activating and encouraging supervisees' creativity and intuition through the clinical supervisory relationship.* (Doctoral dissertation, Kent State University, Kent, OH).

Van Eeten, M. (2001). Recasting intractable policy issues: The wider implications of the Netherlands civil aviation controversy. *Journal of Policy Analysis & Management, 20*, 391–414.

Watts, S., & Stenner, P. (2012). *Doing Q methodological research: Theory, method and interpretation*. London, UK: Sage.

Willis, R. (2019). The use of composite narratives to present interview findings. *Qualitative Research 19*, 471-480.

Zhang, H., Satlykgylyjova, M., Almuhajiri, M., & Brown, S. R. (2013). Harvesting suggestions: A strategy for promoting policies designed to improve academic life for international students. *Operant Subjectivity, 36*, 231–250.